	-	_	
Sheet	1	of	1
Sacci		OΤ	

Substitute Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221
Information Disclosure Statement by Applicant (the several sheets if necessary) 387 CFR \$1.98(b)	plicant	Applicant Joseph A. Zupanick	
	eets if necessary)	Filing Date January 30, 2004	Group Art Unit 3672

	U.S. Patent Documents								
Exam Init	,	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate	
9		A1	2,934,904	05/03/1960	H.V. Hendrix				
		A2	3,534,822	10/20/1970 .	Campbell et al.				
		A3	3,763,652	10/09/1973	Rinta				
		A4	4,662,440	05/05/1987	Harmon et al.				
		A5	4,754,808	07/05/1988	Harmon et al.				
		A6	5,992,524	11/30/1999	Graham				
		A7	6,470,978 B2	10/29/2002	Trueman et al.				
		A8	2005/0133219 A1	06/23/2005	Zupanick				
		A9							
		A10							
		A11							

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner	Desig.	Document	Publication	Country or			Trans	lation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	Bl							
	B2							
	B3							
	B4							
	B5							

	Other Documents (include Author, Title, Date, and Place of Publication)								
Examiner	Desig.								
Initial	ID	Document							
465	C1	Notes on Consol Presentation (by P. Thakur) made at IOGA PA in Pittsburgh, Pennsylvania on May 22, 2002 (3 pages).							
	C2								
	C3								
	C4	••							

Examiner Signature	Date Considered 2/3/2006
EXAMINER: Initials citation considered. Draw line through citation if no	t in conformance and not considered. Include copy of this form with
next communication to applicant.	·

	Substitute Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Attomey's Docket No. 17601-038001	Application No. 10/769,221	
	Information Dis	sclosure Statement	Applicant Joseph A. Zupanick		
E.		sheets if necessary)	Filing Date January 30, 2004	Group Art Unit 3672	
1	& TRADENA				

Q TRAUE				nt Documents			
Examiner Initial	Desig.	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
-(M)	Al	3,163,211	12/29/1964	D.H. Henley			
7	A2	3,578,077	05/11/1971	Glenn, Jr. et al.			
	A3	4,676,313	06/30/1987	Rinaldi			_
	A4	4,705,109	11/10/1987	Ledent et al.			
	A5	4,718,485	01/12/1988	Brown et al.			
	A6	4,727,937	03/01/1988	Shum et al.			
	A7	5,016,709	05/21/1991	Combe et al.			
	A8	5,033,550	07/23/1991	Johnson et al.		-	
	A9	5,115,872	05/26/1992	Brunet et al.			
	A10	5,289,888	03/01/1994	Talley			·
	A11	5,343,965`	09/06/1994	Talley et al.		_	
	A12	5,941,307	08/24/1999	Tubel			
	A13	5,944,107	08/31/1999	Ohmer			
	A14	5,988,278	11/23/1999	Johnson			
	A15	6,079,495	06/27/2000	Ohmer			
	A16	6,089,322	07/18/2000	Kelley et al.			
	A17	6,170,571 B1	01/09/2001	Ohmer			
	A18	6,192,988 B1	02/27/2001	Tubel			
	A19	6,199,633 B1	03/13/2001	Longbottom			
	A20	6,247,532 B1	06/19/2001	Ohmer			
	A21	6,263,965 B1	07/24/2001	Schmidt et al.			
	A22	6,283,216 B1	09/04/2001	Ohmer	·		
	A23	6,318,457 B1	11/20/2001	Den Boer et al.			
	A24	6,491,101 B2	12/10/2002	Ohmer			
	A25	6,554,063 B2	04/29/2003	Ohmer			
	A26	6,557,628 B2	05/06/2003	Ohmer			
	A27	6,564,867 B2	05/20/2003	Ohmer			

Examiner Signature Dam	Date Considered 2/13 / 06
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	ot in conformance and not considered. Include copy of this form with Substitute Disclosure Form (PTO-1449)

	/				
	Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221	
Information Disclosure Statement by Applicant			Applicant Joseph A. Zupanick		
	(Modified) Patent and Trademark Office Information Disclosure Statement by Applicant (Use several sheets if necessary)	Filing Date	Group Art Unit		
	(37 CFR §1.98(b))		January 30, 2004	3672	

	U.S. Patent Documents								
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate		
	A28	2004/0020655 A1	02/05/2004	Rusby et al.					

	Foreign Patent Documents or Published Foreign Patent Applications									
Examiner	Desig.	sig. Document	Publication	Country or			Translation			
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No		
	Bl	WO 98/25005	06/11/1998	WIPO			N/A			
	B2	WO 2005/003509 A1	01/13/2005	WIPO			N/A			

	Other Documents (include Author, Title, Date, and Place of Publication)					
Exa	Examiner Desig.					
Ir	nitial	ID	Document			
Q		Cl	Dreiling, Tim, McClelland, M.L. and Bilyeu, Brad, "Horizontal & High Angle Air Drilling in the San Juan Basin, New Mexico," Believed to be dated April 1996, pp. 1-11			
	C2		Technology Scene Drilling & Intervention Services, "Weatherford Moves Into Advanced Multilateral Well Completion Technology" and "Productivity Gains and Safety Record Speed Acceptance of UBS," Reservoir Mechanics, Weatherford International, Inc., 2000 Annual Report (2 pages)			
	C3		Santos, Helio, SPE, Impact Engineering Solutions and Jesus Olaya, Ecopetrol/ICP, "No-Damage Drilling: How to Achieve this Challenging Goal?," SPE 77189, Copyright 2002, presented at the IADC/SPE Asia Pacific Drilling Technology, Jakarta, Indonesia, 09/09-11/2002, 10 pages			
	C4		Santos, Helio, SPE, Impact Engineering Solutions, "Increasing Leakoff Pressure with New Class of Drilling Fluid," SPE 78243, Copyright 2002, presented at the SPE/ISRM Rock Mechanics Conference in Irving, Texas, 10/20-23/2002, 7 pages			
	C5		Franck Labenski, Paul Reid, SPE, and Helio Santos, SPE, Impact Solutions Group, "Drilling Fluids Approaches for Control of Wellbore Instability in Fractured Formations," SPE/IADC 85304, Society of Petroleum Engineers, Copyright 2003, presented at the SPE/IADC Middle East Drilling Technology Conference & Exhibition in Abu Chabi, UAE, 10/20-22/2003, 8 pages			
		C6	P. Reid, SPE, and H. Santos, SPE, Impact Solutions Group, "Novel Drilling, Completion and Workover Fluids for Depleted Zones: Avoiding Losses, Formation Damage and Stuck Pipe," SPE/IADC 85326, Society of Petroleum Engineers, Copyright 2003, presented at the SPE/IADC Middle East Drilling Conference & Exhibition in Abu Chabi, UAE, 10/20-22/2003, 9 pages			
		C7	Craig C. White and Adrian P. Chesters, NAM; Catalin D. Ivan, Sven Maikranz and Rob Nouris, M-I L.L.C., "Aphron-based drilling fluid: Novel technology for drilling depleted formations," WORLD OIL, Drilling Report Special Focus, October 2003, 5 pages			
A	\mathcal{YU}	C8	Robert E. Snyder, "Drilling Advances," WORLD OIL, October 2003, 1 page			

Examiner Signature	Date Considered /
Dams	2/23/02
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	t in conformance and not considered. Include copy of this form with
	Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office			
1	closure Statement	Applicant Joseph A. Zupanick		
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date January 30, 2004	Group Art Unit 3672	

[Other Documents (include Author, Title, Date, and Place of Publication)						
	Examiner Initial	Desig. ID	Document				
9	Q,	C9	U.S. Environmental Protection Agency, "Directional Drilling Technology," prepared for the EPA by Advanced Resources International under Contract 68-W-00-094, Coalbed Methane Outreach Program (CMOP), published December 2002, Website: http://search.epa.gov/s97is.vts, printed 3/17/2005, 13 pages				
		C10	"Meridian Tests New Technology," Western Oil World, June 1990, Cover, Table of Contents and p. 13				
		C11	Clint Leazer and Michael R. Marquez, "Short-Radius Drilling Expands Horizontal Well Applications," Petroleum Engineer International, April 1995, 6 pages				
		C12	Terry R. Logan, "Horizontal Drainhole Drilling Techniques Used in Rocky Mountains Coal Seams," Geology and Coal-Bed Methane Resources of the Northern San Juan Basin, Colorado and New Mexico, Rocky Mountain Association of Geologists, Coal-Bed Methane, San Juan Basin, 1988, pp. cover, 133-142				
		C13	Daniel J. Brunner; Jeffrey J. Schwoebel, and Scott Thomson, "Directional Drilling for Methane Drainage & Exploration in Advance of Mining," Website: http://www.advminingtech.com.au/Paper4.htm, printed April 6, 2005, Copyright 1999, Last modified August 7, 2002 (8 pages)				
		C14	Karen Bybee, highlights of paper SPE 84424, "Coalbed-Methane Reservoir Simulation: An Evolving Science," by T.L. Hower, JPT Online, April 2004, Website: http://www.spe.org/spe/jpt/jsp/jptpapersynopsis/0,2439,1104_11038_2354946_2395832,00.html, printed April 14, 2005, 4 pages				
		C15	Kevin Meaney and Lincoln Paterson, "Relative Permeability in Coal," SPE 36986, Society of Petroleum Engineers, Copyright 1996, pp. 231-236				
		C16	Calendar of Events – Conference Agenda, Fifth Annual Unconventional Gas and Coalbed Methane Conference, October 22-24, 2003, in Calgary Alberta, Website: http://www.csug.ca/cal/calc0301a.html , printed March 17, 2005, 5 pages				
		C17	Tom Engler and Kent Perry, "Creating a Roadmap for Unconventional Gas R&D," Gas TIPS, Fall 2002, pp. 16-20				
		C18	CSIRO Petroleum – SIMEDWin, "Summary of SIMEDWin Capabilities," Copyright 1997-2005, Website: http://www.dpr.csiro.au/ourcapabilities/petroleumgeoengineering/reservoirengineering/projects/sime dwin/assets/simed/index.html, printed March 17, 2005, 10 pages				
	C19		Solutions From the Field, "Coalbed Methane Resources in the Southeast," Copyright 2004, Website: http://www.pttc.org/solutions/sol_2004/537.htm , printed March 17, 2005, 7 pages				
	C		Jeffrey R. Levine, Ph.D., "Matrix Shrinkage Coefficient," Undated, 3 pages				
		C21	G. Twombly, S.H. Stepanek, T.A. Moore, "Coalbed Methane Potential in the Waikato Coalfield of New Zealand: A Comparison With Developed Basins in the United States, 2004 New Zealand Petroleum Conference Proceedings, March 7-10, 2004, pp. 1-6				
	Ü	C22	R.W. Cade, "Horizontal Wells: Development and Applications," Presented at the Fifth International Symposium on Geophysics for Mineral, Geotechnical and Environmental Applications, October 24-28, 1993 in Tulsa, Oklahoma, Website: http://www.mgls.org/93Sym/Cade/cade.html , printed March 17, 2005, 6 pages				
	Evaminas Cias		Date Considered				

	C22	Symposium on Geophysics for Mineral, Geotechnical and Environmental Applications, October 24-28, 1993 in Tulsa, Oklahoma, Website: http://www.mgls.org/93Sym/Cade/cade.html , printed March 17, 2005, 6 pages
Examiner Sign	\mathcal{L}	Date Considered 9/3/06
EXAMINER: In next communic		
		Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office			
	closure Statement oplicant	Applicant Joseph A. Zupanick		
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date January 30, 2004	Group Art Unit 3672	

	Other Documents (include Author, Title, Date, and Place of Publication)					
Examiner	Desig.					
Initial	ID	Document				
Q	C23	Solutions From the Field, "Horizontal Drilling, A Technology Update for the Appalachian Basin," Copyright 2004, Website: http://www.pttc.org/solutions/sol_2004/535.htm , printed March 17, 2005, 6 pages				
	C24	R. Purl, J.C. Evanoff and M.L. Brugler, "Measurement of Coal Cleat Porosity and Relative Permeability Characteristics," SPE 21491, Society of Petroleum Engineers, Copyright 1991, pp. 93- 104				
	C25	Peter Jackson, "Drilling Technologies for Underground Coal Gasification," IMC Geophysics Ltd., International UCG Workshop – October 2003 (20 pages)				
	C26	Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration (3 pages), International Search Report (3 pages) and Written Opinion of the International Searching Authority (5 pages) re International Application No. PCT/US2005/002162 mailed April 22, 2005				
	C27	Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration (3 pages), International Search Report (3 pages) and Written Opinion of the International Searching Authority (5 pages) re International Application No. PCT/US2005/005289 mailed April 29, 2005				
	C28	Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration (3 pages), International Search Report (5 pages) and Written Opinion of the International Searching Authority (5 pages) re International Application No. PCT/US2004/036616 mailed February 24, 2005				
	C29	Notification of Transmittal of International Preliminary Examination Report (1 page) and International Preliminary Examination Report (3 pages) for International Application No. PCT/US03/13954 mailed April 14, 2005				
	C30	Notification of Transmittal of International Preliminary Examination Report (1 page) and International Preliminary Examination Report (5 pages) mailed January 18, 2005 and Written Opinion (8 pages) mailed August 25, 2005 for International Application No. PCT/US03/30126				
	C31	Notification of Transmittal of the International Search Report or the Declaration (3 pages) and International Search Report (5 pages) mailed November 10, 2000 for International Application No. PCT/US99/27494				
	C32	Notification of Transmittal of International Preliminary Examination Report (1 page) and International Preliminary Examination Report (6 pages) mailed April 2, 2001 and Written Opinion mailed September 27, 2000 for International Application No. PCT/US99/27494				
	C33	Notification of Transmittal of the International Search Report or the Declaration (3 pages) and International Search Report (5 pages) mailed June 6, 2002 for International Application No. PCT/US02/02051				
	C34	Notification of Transmittal of the International Search Report or the Declaration (3 pages) and International Search Report (6 pages) mailed March 13, 2003 for International Application No. PC/US02/33128				

Examiner Signature Dan O	Date Considered 2/23/06
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	it in conformance and not considered. Include copy of this form with

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. Application No. 17601-038001 10/769,221		
by Ap	losure Statement plicant	Applicant Joseph A. Zupanick		
(Use several sheets if necessary) (37 CFR §1.98(b))		Filing Date January 30, 2004	Group Art Unit 3672	

	Other Documents (include Author, Title, Date, and Place of Publication)						
Examiner							
Initial	ID	Document					
U	C35	Notification of Transmittal of International Preliminary Examination Report (1 page) and International Preliminary Examination Report (3 pages mailed April 22, 2004 and Written Opinion mailed September 4, 2003 for International Application No. PCT/US02/33128					

Examiner Signature Down	Date Considered 2/93/06
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	t in conformance and not considered. Include copy of this form with

Substitute Form PTC 449 US Department of Commerce (Modified)

Information Declosure Statement by Applicant (Use several sheets if necessary)

(37 CFR §1.98(b))

Silect 1 01 2

Attorney's Docket No. 17601-038001 10/769,221

Applicant Joseph A. Zupanick

Filing Date Group Art Unit January 30, 2004 3672

	U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate	
	Al							
	A2							
	A3							
	A4							
	A5							

	Foreig	n Patent Doc	uments or P	ublished Foreign	Patent /	Application	ns	
Examiner	Desig.	Document	Publication	Country or			Trans	lation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	B1	WO 97/21900	06/19/1997	WIPO			N/A	
	B2				:			
	В3							
	B4							
	B5		:					

	Other Documents (include Author, Title, Date, and Place of Publication)				
Examiner	Desig.				
Ipitial :	ם	Document			
	Cl	Listing of 174 References received from Third Party on February 16, 2005 (9 pages)			
	C2	Gardes Directional Drilling, "Multiple Directional Wells From Single Borehole Developed," Reprinted from July 1989 edition of Offshore, Copyright 1989 by PennWell Publishing Company (4 pages)			
	С3	"Economic Justification and Modeling of Multilateral Wells," Economic Analysis, Hart's Petroleum Engineer International, 1997 (4 pages)			
	C4	Mike Chambers, "Multi-Lateral Completions at Mobil Past, Present, and Future," presented at the 1998 Summit on E&P Drilling Technologies, Strategic Research Institute, August 18-19, 1998 in San Antonio, Texas (26 pages)			
	C5	David C. Oyler and William P. Diamond, "Drilling a Horizontal Coalbed Methane Drainage System From a Directional Surface Borehole," PB82221516, National Technical Information Service, Bureau of Mines, Pittsburgh, PA, Pittsburgh Research Center, April 1982 (56 pages)			
IN	C6 .	P. Corlay, D. Bossie-Codreanu, J.C. Sabathier and E.R. Delamaide, "Improving Reservoir Management With Complex Well Architectures," Field Production & Reservoir Management, World Oil, January 1997 (5 pages)			

Examiner Signature Dam	Date Considered 9/23/06
EXAMINER: Initials citation considered. Draw line through citation if n next communication to applicant.	
	Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified)			Attorney's Docket No. Application No. 17601-038001 10/769,221		
by Ar	closure Statement oplicant	Applicant Joseph A. Zupanick			
(Use several sh	neets if necessary)	Filing Date January 30, 2004	Group Art Unit 3672		

	0	ther D	ocuments (include Author, Title, Date, and Place of Publication)
Examin Initial		Desig. ID	Document
M		C7	Eric R. Skonberg and Hugh W. O'Donnell, "Horizontal Drilling for Underground Coal Gasification," presented at the Eighth Underground Coal Conversion Symposium, Keystone, Colorado, August 16, 1982 (8 pages)
		C8	Gamal Ismail, A.S. Fada'q, S. Kikuchi, H. El Khatib, "Ten Years Experience in Horizontal Application & Pushing the Limits of Well Construction Approach in Upper Zakum Field (Offshore Abu Dhabi)," SPE 87284, Society of Petroleum Engineers, October 2000 (17 pages)
		С9	Gamal Ismail, H. El-Khatib – ZADCO, Abu Dhabi, UAE, "Multi-Lateral Horizontal Drilling Problems & Solutions Experienced Offshore Abu Dhabi," SPE 36252, Society of Petroleum Engineers, October 1996 (12 pages)
		C10	C.M. Matthews and L.J. Dunn, "Drilling and Production Practices to Mitigate Sucker Rod/Tubing Wear-Related Failures in Directional Wells," SPE 22852, Society of Petroleum Engineers, October 1991 (12 pages)
	-	C11	H.H. Fields, Stephen Krickovic, Albert Sainato, and M.G. Zabetakis, "Degasification of Virgin Pittsburgh Coalbed Through a Large Borehole," RI-7800, Bureau of Mines Report of Investigations/1973, United States Department of the Interior, 1973 (31 pages)
		C12	William P. Diamond, "Methane Control for Underground Coal Mines," IC-9395, Bureau of Mines Information Circular, United States Department of the Interior, 1994 (51 pages)
		C13	Technology Scene Drilling & Intervention Services, "Weatherford Moves Into Advanced Multilateral Well Completion Technology," <i>Reservoir Mechanics</i> , Weatherford International, Inc., 2000 Annual Report (2 pages)
		C14	"A Different Direction for CBM Wells," W Magazine, 2004 Third Quarter (5 pages)
		C15	Snyder, Robert E., "What's New in Production," WorldOil Magazine, February 2005, [retrieved from the internet on 3/7/2005], http://www.worldoil.com/magazine/MAGAZINE_DETAIL. asp?ART_ID=2507@MONTH_YEAR (3 pages)
		C16	Nazzal, Greg, "Moving Multilateral Systems to the Next Level," Strategic Acquisition Expands Weatherford's Capabilities, 2000 (2 pages)
		C17	Bahr, Angie, "Methane Draining Technology Boosts Safety and Energy Production," Energy Review, February 4, 2005, Website: www.energyreview.net/storyviewprint.asp, printed February 7, 2005 (2 pages)
		C18	Molvar, Erik M., "Drilling Smarter: Using Directional Drilling to Reduce Oil and Gas Impacts in the Intermountain West," Prepared by Biodiversity Conservation Alliance, Report issued February 18, 2003, 34 pages
	\mathcal{I}	C19	King, Robert F., "Drilling Sideways - A Review of Horizontal Well Technology and Its Domestic Application," DOE/EIA-TR-0565, U.S. Department of Energy, April 1993, 30 pages

Examiner Signature Down	Date Considered 9/23/06
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	at in conformance and not considered. Include copy of this form with

FEB 0 1 2005

Substitute form PTO-1449 (Modified)

U.S. Department of Commerce Patent and Trademark Office

Attorney's Docket No. 17601-038001

Application No. 10/769,221

Information Disclosure Statement by Applicant (Use several sheets if necessary)

Applicant | Joseph A. Zupanick

Group Art Unit

(37 CFR §1.98(b))

Filing Date January 30, 2004 3672

				U.S. Pate	ent Documents			
	aminer njtial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
		A1	4,417,829	11/29/1983	Berezoutzky			
		A2	4,889,186	12/26/1989	Hanson et al.			
		A3	5,676,207	10/14/1997	Simon et al.			
		A4	6,237,284 B1	05/29/2001	Erickson			. =
	i	A5	2004/0140129 A1	07/22/2004	Gardes			
9	W	A6	2004/0226719 A1	11/18/2004	Morgan et al.			

•	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	Desig.	Document	Publication	Country or	Olean	Out along	ļ	lation
Initial /	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	B1	442,008	01/23/1936	United Kingdom			N/A	
	B2	444,484	03/17/1936	United Kingdom		_	N/A	
	В3	651,468	04/04/1951	United Kingdom			N/A	
	B4	893,869	04/18/1962	United Kingdom			N/A	
	B5	SU-876968	10/30/1981	Russia			Y	
	В6	WO 2004/035984 A1	04/29/2004	WIPO			N/A	

	Other Documents (include Author, Title, Date, and Place of Publication)					
Examiner Initial	Desig. ID	Document				
W	CI	Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration (3 pages), International Search Report (3 pages), and Written Opinion of the International Searching Authority (5 pages) re International Application No. PCT/US2004/024518 mailed November 10, 2004				
9	C2	Schenk, Christopher J., "Geologic Definition and Resource Assessment of Continuous (Unconventional) Gas Accumulations – the U.S. Experience," Website, http://aapg.confex.com///, printed November 16, 2004 (1 page)				
V	C3	U.S. Department of Interior, U.S. Geological Survey, "Characteristics of Discrete and Basin-Centered Parts of the Lower Silurian Regional Oil and Gas Accumulation, Appalachian Basin: Preliminary Results From a Data Set of 25 oil and Gas Fields," U.S. Geological Survey Open-File Report 98-216, Website, http://pubs.usgs.gov/of/1998/of98-216/introl.htm, printed November 16, 2004 (2 pages)				

Examiner Signature	Date Considered 2/93/06
EXAMINER: Initials citation considered. Draw line through citation if n next communication to applicant.	ot in conformance and not considered. Include copy of this form with Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 U.S. Department of Commerce (Modified) Patent and Trademark Office		Attomey's Docket No	Application No. 10/769,221	
	losure Statement plicant	Applicant Joseph A. Zupanick		
(Use several she (37 CFR §1.98(b))	ets if necessary)	Filing Date January 30, 2004	Group Art Unit 3672	
(31 CFR 91.30(0))				

	Other Documents (include Author, Title, Date, and Place of Publication)				
Exar	niner	Desig.			
Ini	tial	ID	Document		
4	1	Zupanick, J., "Coalbed Methane Extraction," 28th Mineral Law Conference, Lexington, Kentuc October 16-17, 2003 (48 pages)			
. \		C5	Zupanick, J., "CDX Gas - Pinnacle Project," Presentation at the 2002 Fall Meeting of North American Coal Bed Methane Forum, Morgantown, West Virginia, October 30, 2002 (23 pages)		
	•	C6	Lukas, Andrew, Lucas Drilling Pty Ltd., "Technical Innovation and Engineering Xstrata – Oaky Creek Coal Pty Limited," Presentation at Coal Seam Gas & Mine Methane Conference in Brisbane, November 22-23, 2004 (51 pages)		
•		C7	Field, Tony, Mitchell Drilling, "Let's Get Technical – Drilling Breakthroughs in Surface to In-Seam in Australia," Presentation at Coal Seam Gas & Mine Methane Conference in Brisbane, November 22-23, 2004 (20 pages)		
	·	C8	Zupanick, Joseph A, "Coal Mine Methane Drainage Utilizing Multilateral Horizontal Wells," 2005 SME Annual Meeting & Exhibit, February 28 – March 2, 2005, Salt Lake City, Utah (6 pages)		
	W	С9	The Official Newsletter of the Cooperative Research Centre for Mining Technology and Equipment, CMTE News 7, "Tight-Radius Drilling Clinches Award," June 2001, 1 page		

Examiner Signature	Date Considered 2/23/06
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	it in conformance and not considered. Include copy of this form with

,	Supplified Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221	
	1 ·	closure Statement oplicant	Applicant Joseph A. Zupanick		
E.	(Use several s	neets if necessary)	Filing Date	Group Art Unit	

	U.S. Patent Documents							
Examiner Desig. Document Publication Filing D Initial ID Number Date Patentee Class Subclass If Appropriate								
	A1	3,744,565	07/10/1973	Brown				
W	A2	4,060,130	11/29/1977	Hart				
90	А3	2002/0043404 A1	04/18/2002	Trueman et al.				

	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Desig. Document Publication Country or Translation								slation
Initial	D D	Number	Date	Patent Office	Class	Subclass	Yes	No
	Bl	EP 1 316 673 A2	06/04/2003	EPO			N/A	
	B2	SU-876968	10/30/1981	Russia				x

		Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Desig.			Document
 	nitiai	ID	
St		Cl	Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration (3 pages), International Search Report (5 pages) and Written Opinion of the International Searching Authority (6 pages) re International Application No. PCT/US2004/012029 mailed September 22, 2004
		C2	Brunner, D.J. and Schwoebel, J.J., "Directional Drilling for Methane Drainage and Exploration in Advance of Mining," REI Drilling Directional Underground, World Coal, 1999, 10 pages
		C3	Thakur, P.C., "A History of Coalbed Methane Drainage From United States Coal Mines," 2003 SME Annual Meeting, February 24-26, Cincinnati, Ohio, 4 pages
		C4	U.S. Climate Change Technology Program, "Technology Options for the Near and Long Term," 4.1.5 Advances in Coal Mine Methane Recovery Systems, pp. 162-164
	ن.	C5	Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration (3 pages), International Search Report (3 pages) and Written Opinion of the International Searching Authority (7 pages) re International Application No. PCT/US2004/017048 mailed October 21, 2004
		C6	Gardes, Robert, "Multi-Seam Completion Technology," Natural Gas Quarterly, E&P, June 2004, pp. 78-81
		C7	Baiton, Nicholas, "Maximize Oil Production and Recovery," Vertizontal Brochure, received 10/2/2002, 4 pages
		C8	Dreiling, Tim, McClelland, M.L. and Bilyeu, Brad, "Horizontal & High Angle Air Drilling in the San Juan Basin, New Mexico," Dated on or about 3/6/2003, pp. 1-11

Examiner Signature	Date Considered
Dons	2/23/06
EXAMINER: Initials citation considered. Draw line through citation if no	ot in conformance and not considered. Include copy of this form with
next communication to applicant.	Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221	
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Joseph A. Zupanick		
		Filing Date January 30, 2004	Group Art Unit 3672	

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
Ó	С9	Fong, David K., Wong, Frank Y., and McIntyre, Frank J., "An Unexpected Benefit of Horizontal Wells on Offset Vertical Well Productivity in Vertical Miscible Floods," Canadian SPE/CIM/CANMET Paper No. HWC94-09, paper to be presented March 20-23, 1994, Calgary, Canada, 10 pages
	C10	Fischer, Perry A., "What's Happening in Production," World Oil, June 2001, p. 27
	C11	Website of PTTC Network News Volume 7, 1st Quarter 2001, Table of Contents, http://www.pttc.org//news/v7n1nn4.htm printed 04/25/2003, 3 pages
	C12	Cox, Richard J.W., "Testing Horizontal Wells While Drilling Underbalanced," Delft University of Technology, August 1998, 68 pages
·	C13	McLennan, John, et al., "Underbalanced Drilling Manual," Gas Research Institute, Chicago, Illinois, GRI Reference No. GRI-97/0236, copyright 1997, 502 pages
	C14	The Need for a Viable Multi-Seam Completion Technology for the Powder River Basin, Current Practice and Limitations, Gardes Energy Services, Inc., Believed to be 2003 (8 pages)
		Langley, Diane, "Potential Impact of Microholes Is Far From Diminutive," JPT Online, http://www.spe.org/spe/jpt/jps, November 2004 (5 pages)
	C16	Consol Energy Slides, "Generating Solutions, Fueling Change," Presented at Appalachian E&P Forum, Harris Nesbitt Corp., Boston, October 14, 2004 (29 pages)

Examiner Signature DVV	Date Considered 9/23/06
EXAMINER: Initials citation considered. Draw line through citation if next communication to applicant.	
	Substitute Disclosure Form (PTO-1449)

Sheet	1	of	1

Subetitute Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221
12 6 by Ap	closure Statement	Applicant Joseph A. Zupanick	
(37 CFR \$1.650))	eets if necessary)	Filing Date January 30, 2004	Group Art Unit 3672

	U.S. Patent Documents						
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	A1	4,651,836	03/24/1987	Richards			
Q	A2	5,355,967	10/18/1994	Mueller et al.			
<u>W</u>	A3	5,775,443	07/07/1998	Lott			
	A4						
	A5						
	A6						
	A7						
	A8						
	A9						
	A10						
	A11						

	Foreigi	n Patent Doo	uments or Pu	blished Foreign	Patent A	Application	ns	
Examiner	Desig.	Desig. Document	Publication	Country or			Translation	
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	Bl							
	B2							
	В3	_						
	B4							
	B5							

	Other Documents (include Author, Title, Date, and Place of Publication)					
Examiner Initial	Desig. ID	Document				
t	Cl	PowerPoint Presentation entitled, "Horizontal Coalbed Methane Wells," by Bob Stayton, Computalog Drilling Services, date is believed to have been in 2002 (39 pages)				
Q	C2	Denney, Dennis, "Drilling Maximum-Reservoir-Contact Wells in the Shaybah Field," SPE 85307, pages 60, 62-63, October 20, 2003				
	C3					
	C4					

Examiner Signature	Date Considered 2/23/06					
XAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with						
next communication to applicant.	Substitute Disclosure Form (PTO-1449)					

(Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221		
SEP 0 2 200 nformation Dis	pplicant	Applicant Joseph A. Zupanick			
(Use several si	neets if necessary)	Filing Date January 30, 2004	Group Art Unit		

U.S. Patent Documents								
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate	
	A1	2,797,893	07/02/1957	McCune et al.				
	A2	3,385,382	05/28/1968	Canalizo et al.				
	A3	3,582,138	06/01/1971	Loofbourow et al.				
	A4	3,587,743	06/28/1971	Howard				
	A5	4,020,901	05/03/1977	Pisio et al.				
	A6	4,030,310	06/21/1977	Schirtzinger				
	A7	4,136,996	01/30/1979	Burns				
	A8	4,151,880	05/01/1979	Vann				
	· A9	4,182,423	01/08/1980	Ziebarth et al.				
	A10	4,222,611	09/16/1980	Larson et al.				
	A11	4,226,475	10/07/1980	Frosch et al.				
	A12	4,415,205	11/15/1983	Rehm et al.				
	A13	4,422,505	12/27/1983	Collins				
	A14	4,463,988	08/07/1984	Bouck et al.				
	A15	4,502,733	03/05/1985	Grubb				
	A16	4,533,182	08/06/1985	Richards				
	A17	4,536,035	08/20/1985	Huffman et al.				
	A18	4,603,592	08/05/1986	Siebold et al.				
	A19	4,753,485	06/28/1988	Goodhart				
	A20	4,776,638	10/11/1988	Hahn				
	A21	4,832,122	05/23/1989	Corey et al.				
	A22	5,127,457	07/07/1992	Stewart et al.				
	A23	5,148,877	09/22/1992	MacGregor				
	A24	5,226,495	07/13/1993	Jennings Jr.		<u></u>	<u> </u>	
	/ A25	5,287,926	02/22/1994	Grupping				
	A26	5,431,482	07/11/1995	Russo				
	A27	5,697,445	12/16/1997	Graham			<u> </u>	

Examiner Signature	Date Considered 2DS 106
EXAMINER: Initials citation considered. Draw line through citation if no	t in conformance and not considered. Include copy of this form with

Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office			
1	closure Statement pplicant	Applicant Joseph A. Zupanick		
(Use several s	by Applicant (Use several sheets if necessary) 7 CFR \$1.98(b))	Filing Date January 30, 2004	Group Art Unit	

	_			U.S. Pate	nt Documents	· · · · · ·		
	Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
		A28	6,019,173	02/01/2000	Saurer et al.			
	1	A29	6,030,048	02/29/2000	Hsu			
		A30	6,062,306	05/16/2000	Gano et al.			
		A31	6,065,551	05/23/2000	Gourley et al.			_
		A32	6,119,776	09/19/2000	Graham et al.			
		A33	6,189,616	02/20/2001	Gano et al.			
		A34	6,244,340	06/12/2001	McGlothen et al.			
		A35	6,279,658	08/28/2001	Donovan et al.			
		A36	6,575,255	06/10/2003	Rial et al.			
		A37	6,591,922	07/15/2003	Rial et al.			
		A38	6,595,301	07/22/2003	Diamond et al.			
	·	A39	6,595,302	07/22/2003	Diamond et al.			
		A40	6,644,422	11/11/2003	Rial et al.			
		A41	6,646,441	11/11/2003	Thompson et al.			
		A42	6,722,452	04/20/2004	Rial et al.			
•		A43	6,758,279	07/06/2004	Moore et al.			
		A44	2003/0164253 A1	09/04/2003	Trueman et al.			
		A45	2003/0221836 A1	12/04/2003	Gardes			
		A46	2004/0011560 A1	01/22/2004	Rial et al.			
		A47	2004/0033557 A1	02/19/2004	Scott et al.			
(/ A48	2004/0060351 A1	04/01/2004	Gunter et al.			

	Foreign Patent Documents or Published Foreign Patent Applications									
Examiner	Desig.	Document	Publication	Country or	T		Transla	ation		
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No		
A	BI	AU 85/49964A	11/20/1986	Australia			Abstract Only			
D	B2	CA 2,210,866	01/19/1998	Canada			N/A			

Examiner Signature	Date Considered 2/23/06
EXAMINER: Initials citation considered. Draw line through citation if n next communication to applicant.	
	Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office				
1	closure Statement	Applicant Joseph A. Zupanick		
(Use several sheets if necessary)		Filing Date January 30, 2004	Group Art Unit	

	Foreig	n Patent Doc	uments or P	ublished Foreign	Patent /	Application	ns	
Examiner	Desig.	Document	Publication	Country or			Transla	
Initial	ם ו	Number	Date	Patent Office	Class	Subclass	Yes	No_
IL	В3	DE 197 25 996 A1	01/02/1998	Germany			Abstract Only	···
	B4	EP 0 819 834 A1	01/21/1998	ЕРО			Abstract Only	
	B5	FR 964,503	08/18/1950	France			х	
	В6	WO 02/061238 A1	08/08/2002	WIPO			N/A	
N	В7	WO 94/21889	09/29/1994	WIPO			N/A	

	Other Do	ocuments (include Author, Title, Date, and Place of Publication)					
Examiner	Desig.						
Initial ID		Document					
Sel	C1	B. Goktas et al., "Performances of Openhole Completed and Cased Horizontal/Undulating Wells in Thin-Bedded, Tight Sand Gas Reservoirs," SPE 65619, Society of Petroleum Engineers, October 17, 2000 (7 pages)					
	C2	Sharma, R., et al., "Modelling of Undulating Wellbore Trajectories," The Journal of Canadian Petroleum Technology, Vol. 34, No. 10, XP-002261908, October 18-20, 1993 pp. 16-24 (9 pages)					
	C3	Balbinski, E.F., "Prediction of Offshore Viscous Oil Field Performance," European Symposium on Improved Oil Recovery, August 18-20, 1999, 10 pages					
	C4	Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) (3 pages) and International Search Report (7 pages) re International Application No. PCT/US 03/04771 mailed July 4, 2003					
	C5	Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) (3 pages) and International Search Report (5 pages) re International Application No. PCT/US 03/21891					
	C6	Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) (3 pages) and International Search Report (4 pages) re International Application No. PCT/US 03/38383 mailed June 2, 2004					
	C7	Kalinin, et al., Translation of Selected Pages from Ch. 4, Sections 4.2 (p. 135), 10.1 (p. 402), 10.4 (pp. 418-419), "Drilling Inclined and Horizontal Well Bores," Moscow, Nedra Publishers, 1997, 4 pages					
	C8	Jet Lavanway Exploration, "Well Survey," Key Energy Surveys, November 2, 1997, 3 pages					
	C9	Precision Drilling, "We Have Roots in Coal Bed Methane Drilling," Technology Services Group, Published on or before August 5, 2002, 1 page					
	C10	U.S. Dept. of Energy, "New Breed of CBM/CMM Recovery Technology," July 2003, 1 page					
	C11	Ghiselin, Dick, "Unconventional Vision Frees Gas Reserves," Natural Gas Quarterly, September 2003, 2 pages					
	C12	CBM Review, World Coal, "US Drilling into Asia," June 2003, 4 pages					
N.	C13	Skrebowski, Chris, "US Interest in North Korean Reserves," Petroleum, Energy Institute, July 2003, 4 pages					
	Examiner Signature Date Considered 2/23/06						
EXAMINER: next commun	Initials citati	on considered. Draw line through citation if not in conformance and not considered. Include copy of this form with plicant. Substitute Disclosure Form (PTO-1449)					
		Substitute Disclosure Fulli (F. 10 F. 1.1.)					

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221	
Information Disclosure Statement by Applicant		Applicant Joseph A. Zupanick		
(Use several shi	eets if necessary)	Filing Date January 30, 2004	Group Art Unit	

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
Jel Jel	C14	Platt, "Method and System for Lining Multilateral Wells," S/N 10/772,841, February 5, 2004 (30 pages)
	C15	Zupanick, "Three-Dimentsional Well System For Accessing Subterranean Zones," February 11, 2004, S/N 10/777,503 (27 pages)
	C16	Zupanick, "System And Method For Directional Drilling Utilizing Clutch Assembly," S/N 10/811,118, March 25, 2004 (35 pages)
	C17	Zupanick et al., "Slot Cavity," S/N 10/419,529, April 21, 2003 (44 pages)
	C18	Zupanick, "System and Method for Multiple Wells from a Common Surface Location," S/N 10/788,694, February 27, 2004 (26 pages)
	C19	Field, T.W., "Surface to In-seam Drilling - The Australian Experience," Undated, 10 pages
	C20	Drawings included in CBM well permit issued to CNX stamped April 15, 2004 by the West Virginia Department of Environmenal Protection (5 pages)
	C21	Website of Mitchell Drilling Contractors, "Services: Dymaxion - Surface to In-seam," http://www.mitchell drilling.com/dymaxion.htm, printed as of 06/17/2004, 4 pages
	C22	Website of CH4, "About Natural Gas – Technology," http://www.ch4.com.au/ng_technology.html, copyright 2003, printed as of 06/17/2004, 4 pages
	C23	Thomson, et al., "The Application of Medium Radius Directional Drilling for Coal Bed Methane Extraction," Lucas Technical Paper, copyrighted 2003, 11 pages
	C24	U.S. Department of Energy, DE-FC26-01NT41148, "Enhanced Coal Bed Methane Production and Sequestration of CO2 in Unmineable Coal Seams" for Consol, Inc., accepted October 1, 2001, 48 pages
	C25	U.S. Department of Energy, "Slant Hole Drilling," March 1999, 1 page
	C26	Desai, Praful, et al., "Innovative Design Allows Construction of Level 3 or Level 4 Junction Using the Same Platform," SPE/Petroleum Society of CIM/CHOA 78965, Canadian Heavy Oil Association, 2002, pp. 1-11
	C27	Bybee, Karen, "Advanced Openhole Multilaterals," Horizontal Wells, November 2002, pp. 41-42
	C28	Bybee, Karen, "A New Generation Multilateral System for the Troll Olje Field," Multilateral/Extended Reach, July 2002, 2 pages
	C29	Emerson,, A.B., et al., "Moving Toward Simpler, Highly Functional Multilateral Completions," Technical Note, Journal of Canadian Petroleum Technology, May 2002, Volume 41, No. 5, pp. 9-12
	C30	Moritis, Guntis, "Complex Well Geometries Boost Orinoco Heavy Oil Producing Rates," XP-000969491, Oil & Gas Journal, February 28, 2000, pp. 42-46
	C31	Themig, Dan, "Multilateral Thinking," New Technology Magazine, December 1999, pp. 24-25
M	C32	Smith, R.C., et al., "The Lateral Tie-Back System: The Ability to Drill and Case Multiple Laterals," IADC/SPE 27436, Society of Petroleum Engineers, 1994, pp. 55-64, plus Multilateral Services Profile (1 page) and Multilateral Services Specifications (1 page)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered Draw line through citation if no next communication to applicant.	t in conformance and not considered. Include copy of this form with

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17601-038001	Application No. 10/769,221
	closure Statement	Applicant Joseph A. Zupanick	
	neets if necessary)	Filing Date January 30, 2004	Group Art Unit

	Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Desig.		Document						
(N) C33 p		Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) (3 pages) and International Search Report (4 pages) re International Application No. PCT/US 03/13954 mailed September 1, 2003						
	C34	Logan, Terry L., "Drilling Techniques for Coalbed Methane," Hydrocarbons From Coal, Chapter 12, Copyright 1993, Title Page, Copyright Page, pp. 269-285						
	C35	Hanes, John, "Outbursts in Leichhardt Colliery: Lessons Learned," International Symposium-Cum- Workshop on Management and Control of High Gas Emissions and Outbursts in Underground Coal Mines," Wollongong, NSW, Australia, March 20-24, 1995, Title page, pp. 445-449						
	C36	Williams, Ray, et al., "Gas Reservoir Properties for Mine Gas Emission Assessment," Bowen Basin Symposium 2000, pp. 325-333						
	C37	Brown, K., et al., "New South Wales Coal Seam Methane Potential," Petroleum Bulletin 2, Department of Mineral Resources, Discovery 2000, March 1996, pp. i-viii, 1-96						
		Fipke, S., et al., "Economical Multilateral Well Technology for Canadian Heavy Oil," Petroleum Society, Canadian Institute of Mining, Metallurgy & Petroleum, Paper 2002-100, to be presented in Calgary Alberta, June 11-13, 2002, pages 1-11						

Examiner Signature	Date Considered
EXAMINER: Initials citation considered Draw line through citation next communication to applicant.	if not in conformance and not considered. Include copy of this form with

Substitute Disclosure Form (PTO-1449)

in an Application

Application No. 10/769,221	Applicant(s) Joseph A. Zup	anick
Docket Number 067083.0214	Group Art Unit	Filing Date January 30, 2004

U.S. PATENT DOCUMENTS

<u>`</u>				MANE	22.456	SUBCLASS	FILING DATI
JU		DOCUMENT NO.	DATE	NAME	CLASS		
ZX	A	1,488,106	03/25/1924	J. J. Fitzpatrick	N/A	N/A	02/05/1923
<u> </u>	В	4,333,539	06/08/1992	Lyons et al.	175	61	12/31/1979
\dagger	С	5,411,088	05/02/1995	LeBlanc et al.	166	265	08/06/1993
\dagger	D	5,653,286	08/05/1997	McCoy et al.	166	105.5	05/12/1995
+	E	5,775,433	07/07/1998	Hammett et al.	166	98	04/03/1996
+	F	6,179,054	01/30/2001	Stewart	166	105.5	07/31/1998
ZV	G	6,357,530	03/19/2002	Kennedy et al.	166	369	09/27/1999

FOREIGN PATENT DOCUMENTS

•					<u> </u>			TRANSL	ATION
1	M		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB	YES	NO
	人	H	SU-1448078-A1	03/25/1987	Russia	E21F	5/00-F 7/00	X	
F		ī	SU-1770570-A1	03/30/1990	Russia	E21F	7/00	X	
	Н	J	SU-750108	06/26/1975	Russia	E21C	45/00	х	
_	H	К	WO 98/35133	08/13/1998	PCT	E21C	27/24	х	
-	Н	L	WO 01/44620	06/21/2001	PCT	E21B	43/38	х	1
H	H	M	GB 2 255 033	10/28/1992	Great Britain	B04B	11/02	х	
┝	\forall	N	CA 2 278 735	01/13/1998	Canada	E21C	21/24	х	
-	1	0	CH 653 741	01/15/1986	Germany	E21B	43/24	<u> </u>	X

NON-PATENT DOCUMENTS

_		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
JA	P	Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed February 9, 2004 (6 pages) re International Application No. PCT/US 03/28138.	09/09/2003
ſ	Q	Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed February 27, 2004 (9 pages) re International Application No. PCT/US 03/30126.	09/23/2003
1	R	Fletcher, "Anadarko Cuts Gas Route Under Canadian River Gorge," Oil and Gas Journal, pp. 28-30	January 25, 2004
	S	Translation of selected pages of Kalinin, et al., "Drilling Inclined and Horizontal Well Bores," Nedra Publishers, Moscow, 1997, 15 pages	1997
	J	Translation of selected pages of Arens, V.Zh., "Well-Drilling Recovery of Minerals," Geotechnology, Nedra Publishers, Moscow, 7 pages, 1986	1986

EXAMINER DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. Patent and Trademark Office

1449

FEB 17 200K

Information Disclosus Citation in a Application

Application No. 10/769,221 Docket Number Applicant(s)
Joseph A. Zupanick

Docket Number Group Art Unit 067083.0214

Filing Date
January 30, 2004

Page 1 of 16

U.S. PATENT DOCUMENTS

U.S. PATENT DOCUMENTS							
ΛŁ.		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
苁	A	54,144	04/24/1866	Hamar	N/A	N/A	
1	В	274,740	03/27/1883	Douglass	N/A	N/A	12/02/1892
T	С	526,708	10/02/1894	Horton	N/A	N/A	09/01/1893
\dagger	D	639,036	12/12/1899	Heald	N/A	N/A	08/21/1899
\dagger	E	1,189,560	07/04/1916	Gondos	N/A	N/A	10/21/1914
\dagger	F	1,285,347	11/19/1918	Otto	N/A	N/A	02/09/1918
\dagger	G	1,467,480	09/11/1923	Hogue	N/A	N/A	12/19/1921
T	Н	1,485,615	03/04/1924	Jones	N/A	N/A	12/08/1920
T	1	1,520,737	12/30/1924	Wright	N/A	N/A	04/26/1924
\vdash	J	1,674,392	06/19/1928	Flansburg	N/A	N/A	08/06/1927
	K	1,777,961	10/07/1930	Capeliuschnicoff	N/A	N/A	04/04/1927
	L	2,018,285	10/22/1935	Schweitzer et al.	166	21	11/27/1934
	М	2,069,482	02/02/1937	Seay	255	76	04/18/1935
	N	2,150,228	03/14/1939	Lamb	166	10	08/31/1936
T	0	2,169,718	08/15/1939	Boll et al.	255	24	04/01/1937
T	Р	2,335,085	11/23/1943	Roberts	251	197	03/18/1947
	Q	2,450,223	09/28/1948	Barbour	255	76	11/25/1944
T	R	2,490,350	12/06/1949	Grable	166	4	12/15/1943
Ť	s	2,679,903	06/01/1954	McGowen, Jr. et al.	166	1	11/23/1949
Ť	Т	2,726,063	12/06/1955	Ragland et al.	255	1.8	05/10/1952
T	U	2,726,847	03/31/1952	McCune et al.	255	1.6	03/31/1952
\dagger	V	2,783,018	02/26/1957	Lytle	251	25	02/11/1955
T	w	2,847,189	08/12/1958	Shook	255	76	01/08/1953
T	x	2,911,008	11/03/1959	Du Bois	137	625.31	04/09/1956
T	Y	2,980,142	04/18/1961	Turak	137	637.3	09/08/1958
T	Z	3,208,537	09/28/1965	Scarborough	175	53	12/08/1960
T	AA	3,347,595	10/17/1967	Dahms et al.	299	4	05/03/1965
X)	BB	3,443,648	05/13/1969	Howard	175	103	09/13/1967

EXAMINER

M DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

U.S. Patent and Trademark Office

PTO-1449 FFB 17 2004 5

Information Bechanic Citation
in an Application

Application No. | Applicant(s) | Joseph A. Zupanick |
Docket Number | Group Art Unit | Filing Date | January 30, 2004

U.S. PATENT DOCUMENTS

U.S. PATENT DOCUMENTS							
١٨		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	A.	3,473,571	10/21/1969	Dugay	137	625.4	12/27/1967
٣	B.	3,503,377	03/31/1970	Beatenbough et al.	123	117	07/30/1968
十	C.	3,528,516	09/15/1970	Brown	175	267	08/21/1968
\dagger	D.	3,530,675	09/29/1970	Turzillo	61	35	08/26/1968
T	E.	3,684,041	08/15/1972	Kammerer, Jr. et al.	175	267	11/16/1970
	F.	3,692,041	09/19/1972	Bondi	137	238	01/04/1971
-	G.	3,757,876	09/11/1973	Pereau	175	267	09/01/1971
\vdash	H.	3,757,877	09/11/1973	Leathers	175	269	12/30/1971
	1.	3,800,830	04/02/1974	Etter	137	625.41	01/11/1973
	J.	3,809,519	05/07/1974	Garner	425	245	10/19/1972
	K.	3,825,081	07/23/1974	McMahon	175	73	03/08/1973
	L.	3,828,867	08/13/1974	Elwood	175	45	05/15/1972
T	M.	3,874,413	04/01/1975	Valdez	137	625.47	04/01/1975
\dagger	N.	3,887,008	06/03/1975	Canfield	166	267	03/21/1974
+	О.	3,902,322	09/02/1975	Watanabe	61	35	08/27/1973
\dagger	.P.	3,907,045	09/23/1975	Dahl et al.	175	45	11/30/1976
\dagger	Q.	3,934,649	01/27/1976	Pasini, III et al.	166	254	07/25/1974
\dagger	R.	3,957,082	05/18/1976	Fuson et al.	137	625.41	09/26/1974
+	S.	3,961,824	06/08/1976	Van Eek et al.	299	17	10/21/1974
\dagger	Т.	4,011,890	03/15/1977	Andersson	137	625.4	11/04/1975
T	U.	4,022,279	05/10/1977	Driver	166	271	12/23/1974
t	V.	4,037,658	07/26/1977	Anderson	166	272	10/30/1975
\dagger	W.	4,073,351	02/14/1978	Baum	175	14	06/10/1976
t	X.	4,089,374	05/16/1978	Тепу	166	259	12/16/1976
\dagger	Y.	4,116,012	09/26/1978	Abe et al.	405	238	07/14/1977
T	Z.	4,134,463	01/16/1979	Allen	175	53	06/22/1977
\dagger	AA.	4,156,437	05/29/1979	Chivens et al.	137	554	02/21/1978
\star	BB.	4,169,510	10/02/1979	Meigs	175	65	08/16/1977

EXAMINER

DATE CONSIDERED 23/06

Information Disclosus Citation in an Application

Application No. 10/769,221	Applicant(s) Joseph A. Zupanick		
Docket Number 067083.0214	Group Art Unit	Filing Date January 30, 2004	

II S	PATENT	DOCU	MENTS
U.J.	raieni.		17/12/13

U.S. PATENT DOCUMENTS							
$\bigcup_{i \in I} f_i$		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
X	A.	4,189,184	02/19/1980	Green	299	8	10/13/1978
7	B.	4,220,203	09/02/1980	Steeman	166	271	12/06/1978
\top	C.	4,221,433	09/09/1980	Jacoby	299	4	07/20/1978
1	D.	4,224,989	09/30/1980	Blount	166	250	10/30/1978
T	E.	4,257,650	03/24/1981	Allen	299	2	09/07/1978
	F.	4,278,137	07/14/1981	Van Eek, deceased	175	267	06/18/1979
	G.	4,283,088	08/11/1981	Tabakov et al.	299	2	05/14/1979
	H.	4,296,785	10/27/1981	Vitello et al.	141	105	07/09/1979
	1.	4,299,295	11/10/1981	Gossard	175	45	02/08/1980
	J.	4,303,127	12/01/1981	Freel et al.	166	266	02/11/1980
	K.	4,305,464	12/15/1981	Masszi	166	370	03/07/1980
	L.	4,312,377	01/26/1982	Knecht	137	625.19	08/29/1979
	M.	4,317,492	03/02/1982	Summers et al.	175	79	02/26/1980
	N.	4,328,577	05/04/1982	Abbott et al.	370	84	06/03/1980
	Ο.	4,366,988	01/04/1983	Bodine	299	14	04/07/1980
	P.	4,372,398	02/08/1983	Kuckes	175	45	11/04/1980
	Q.	4,386,665	06/07/1983	Dellinger	175	61	10/27/1981
	R.	4,390,067	06/28/1983	Willman	166	245	04/06/1981
	S.	4,396,076	08/02/1983	Inoue	175	265	04/27/1981
	T.	4,397,360	08/09/1983	Schmidt	175	61	07/06/1981
	U.	4,401,171	08/30/1983	Fuchs	175	267	12/10/1981
	V.	4,407,376	10/04/1983	Inoue	175	267	06/26/1981
	W.	4,437,706	03/20/1984	Johnson	299	7	08/30/1981
	X.	4,442,896	04/17/1984	Reale et al.	166	278	07/21/1982
	Y.	4,494,616	01/22/1985	McKee	175	67	07/18/1983
	Z.	4,512,422	04/23/1985	Knisley	175	99	06/28/1983
T	AA.	4,519,463	05/28/1985	Schuh	175	61	03/19/1984
	BB.	4,527,639	07/09/1985	Dickinson, III et al.	175	61	03/02/1983
V	Jcc.	4,532,986	08/06/1985	Mims et al.	166	50 .	05/05/1983

EXAMINER

DATE CONSIDERED

PTO-1449

Information Disclosure Citation in an Application

Application No. 10/769,221	Applicant(s) Joseph A. Zupa	nick
Docket Number 067083.0214	Group Art Unit	Filing Date January 30, 2004

	T DOCUMENTS	

U.S. PATENT DOCUMENTS								
1	\mathcal{N}		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
J,	V	A.	4,544,037	10/01/1985	Тепту	166	369	02/21/1984
۴	`	B.	4,558,744	12/17/1985	Gibb	166	335	09/13/1983
T		C.	4,565,252	01/21/1986	Campbell et al.	175 .	269	03/08/1984
ľ		D.	4,573,541	03/04/1986	Josse et al.	175	78	08/09/1984
Γ		E.	4,599,172	07/08/1986	Gardes	210	314	12/24/1984
		F.	4,600,061	07/15/1986	Richards	175	62	06/08/1984
r		G.	4,605,076	08/12/1986	Goodhart	175	61	08/03/1984
ľ		H.	4,611,855	09/16/1986	Richards	299	2	05/11/1984
r	\top	I.	4,618,009	10/21/1986	Carter et al.	175	267	08/08/1984
r		J.	4,638,949	01/27/1987	Mancel	239	307 .	04/26/1984
T	\top	K.	4,646,836	03/03/1987	Goodhart	166	303	12/20/1984
		L.	4,674,579	06/23/1987	Geller et al.	175	45	03/07/1985
Ī		M.	4,702,314	10/27/1987	Huang et al.	166	245	03/03/1986
Γ		N.	4,705,431	11/10/1987	Gadelle et al.	405	267	12/20/1984
r		Ο.	4,715,440	12/29/1987	Boxell et al.	166	100	07/14/1986
		P.	4,754,819	07/05/1988	Dellinger	175	61	03/11/1987
		Q.	4,756,367	07/12/1988	Puri et al.	166	263	04/28/1987
		R.	4,763,734	08/16/1988	Dickinson et al.	175	61	12/23/1985
		S.	4,773,488	09/27/1988	Bell et al.	175	61	08/08/1984
	Π	T.	4,830,105	05/16/1989	Petermann	166	241	02/08/1988
Γ		U.	4,836,611	06/06/1989	El-Saie	299	7	05/09/1988
Γ		V.	4,842,081	06/27/1989	Parant	175	23	05/18/1988
		W.	4,844,182	07/04/1989	Tolle	175	215	06/07/1988
Γ	\prod	X.	4,852,666	08/01/1989	Brunet et al.	175	61	04/07/1988
		Y.	4,883,122	11/28/1989	Puri et al.	166	248	08/22/1990
[Z .	4,978,172	12/18/1990	Schwoebel et al.	299	12	10/26/1989
(1)		AA.	5,016,710	05/21/1991	Renard et al.	166	245	06/26/1987

EXAMINER

DATE CONSIDERED

12/27/1991

09/27/1991

11/07/1991

12/27/1991

06/30/1992

05/13/1991

12/11/1991

10/14/1992

09/10/1992

09/27/1993

PTO-1449

Information Disclosure Citation in an Application

Application No. 10/769,221	Applicant(s) Joseph A. Zup	anick
Docket Number 067083.0214	Group Art Unit	Filing Date January 30, 2004

175

166

405

166

175

299

166 175

175

175

269

303

143

55.8

26

4

278

107

61

67

	U.S. PATENT DOCUMENTS							
^		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
100	A.	5,035,605	07/30/1991	Dinerman et al.	481	018	02/16/1990	
١	В.	5,036,921	08/06/1991	Pittard et al.	166	298	06/28/1990	
\sqcap	C.	5,074,360	12/24/1991	Guinn	. 166	281	07/10/1990	
H	D.	5,074,365	12/24/1991	Kuckes	175	40	09/14/1990	
十	Ε.	5,074,366	12/24/1991	Karlsson et al.	175	76	12/24/1991	
H	F.	5,082,054	01/21/1992	Kiamanesh	166	248	08/22/1990	
1	G.	5,111,893	05/12/1992	Kvello-Aune	175	258	12/24/1990	
1	Н.	5,135,058	08/04/1992	Millgard et al.	175	71	04/26/1990	
\vdash	l.	5,148,875	09/22/1992	Karlsson et al.	175	62	09/24/1991	
H	J.	5,165,491	11/24/1992	Wilson	175	62	04/29/1991	
H	K.	5,168,942	12/08/1992	Wydrinski	175	50	10/21/1991	
H	L.	5,174,374	12/29/1992	Hailey	166	55.8	10/17/1991	
H	M.	5,193,620	03/16/1993	Braddick	166	382	08/05/1991	
1	N.	5,194,859	03/16/1993	Warren	340	853.4	02/08/1991	
H	0.	5,197,553	03/30/1993	Leturno	175	57	08/14/1991	
H	P.	5,197,783	03/30/1993	Theimer et al.	299	17	04/29/1991	
#	Q.	5,199,496	04/06/1993	Redus et al.	166	366	10/18/1991	
		1	1	1	i .	I	L	

/AA. 5,363,927 11/15/1994 Frank EXAMINER DATE CONSIDERED

Hailey

Masek

Hailey

Rosar

Neill et al.

Alexander

Leturno

Graham

Yamaguchi et al.

04/13/1993

06/08/1993

08/31/1993

09/07/1993

09/07/1993

09/21/1993

10/26/1993

12/21/1993

04/12/1994

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

R.

S.

T.

U.

W.

X.

Y.

Z.

5,201,817

5,217,076

5,240,350

5,242,017

5,242,025

5,246,273

5,255,741

5,271,472

5,301,760

PTO-1449 Information Disclosus

in an Application

Application No. 10/769,221 Applicant(s) Citation

Joseph A. Zupanick Docket Number **Group Art Unit**

067083.0214

Filing Date January 30, 2004

	U.S. PATENT DOCUMENTS						
M.		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
XX	A.	5,385,205	01/31/1995	Hailey	166	55.8	10/04/1993
T	В.	5,394,950	03/07/1995	Gardes	175	45	05/21/1993
	C.	5,402,851	04/04/1995	Baiton	166	369	05/03/1993
	D.	5,411,082	05/02/1995	Kennedy	166	181	01/26/1994
	E.	5,411,085	05/02/1995	Moore et al.	166	242	11/01/1993
	F.	5,411,104	05/02/1995	Stanley	175	65	02/16/1994
	G.	5,411,105	05/02/1995	Gray	175	69	06/14/1994
	Н.	5,431,220	07/11/1995	Lennon et al.	166	55.7	03/24/1994
	1.	5,435,400	07/25/1995	Smith	175	61	05/25/1994
	J	5,447, 416	09/05/1995	Wittrisch	417	442	03/28/1994
	K.	5,450,902	09/19/1995	Matthews	166	268	05/14/1993
	L.	5,454,419	10/03/1995	Vloedman	166	277	09/19/1994
Π	M.	5,458,209	10/17/1995	Hayes et al.	175	61	06/11/1993
Π	N.	5,462,116	10/31/1995	СагтоП	166	249	10/26/1994
П	О.	5,462,120	10/31/1995	Gondouin	166	380	01/04/1993
П	P.	5,469,155	11/21/1995	Archambeault et al.	340	853.4	07/11/1994
П	Q.	5,477,923	12/26/1995	Jordan, Jr. et al.	66	313	01/26/1994
Π^{-}	R.	5,485,089	01/16/1996	Kuckes	324	346	10/08/1993
	S.	5,494,121	02/27/1996	Nackerud	175	263	11/29/1994
	T.	5,499,687	03/19/1996	Lee	175	317	11/18/1991
П	U.	5,501,273	03/26/1996	Puri	166	252.5	10/04/1994
Π	V.	5,501,279	03/26/1996	Garg et al.	166	372	01/12/1995
	W.	5,584,605	12/17/1996	Beard et al.	405	128	06/29/1995
	X	5,613,242	03/18/1997	Oddo	588	17	12/06/1994
	Y.	5,615,739	04/01/1997	Dallas	166	306	04/30/1996
	Z.	5,669,444	09/23/1997	Riese et al.	166	263	01/31/1996
	AA.	5,680,901	10/28/1997	Gardes	166	313	12/14/1995
	BB.	5,690,390	11/25/1997	Bithell	299	4	04/19/1996
AOA	CC.	5,706,871	01/13/1998	Anderson et al.	141	59	08/15/1995

EXAMINER

DATE CONSIDERED

Page 7 of 16

PTO-1449

Information Disclosure Citation in ac Application

Application No.
10/769,221

Docket Number
067083.0214

Applicant(s)
Joseph A. Zupanick

Group Art Unit
Filing Date
January 30, 2004

T		28.		U.S. PATENT DOCUMENTS				
r	\sim		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
#	J.	A	5,720,356	02/24/1998	Gardes	175	62	02/01/1996
Ī	7	В	5,727,629	03/17/1998	Blizzard, Jr. et al.	166	298	01/24/1996
T		С	5,735,350	04/07/1998	Longbottom et al.	166	313	10/15/1996
Γ		D	5,771,976	06/30/1998	Talley	166	370	07/19/1996
Ī		E	5,785,133	07/28/1998	Murray et al.	175	61	08/29/1995
Γ		F	5,832,958	11/10/1998	Cheng	137	625.41	09/04/1997
Γ		G	5,853,054	12/29/1998	McGarian et al.	175	267	07/22/1997
T		Н	5,853,056	12/29/1998	Landers	175	424	04/01/1996
ſ		1	5,853,224	12/19/1998	Riese	299	13	01/21/1997
Ī		J	5,863,283	01/26/1999	Gardes	588	250	02/10/1997
T		K	5,868,202	02/09/1999	Hsu	166	256	09/22/1997
Ī		L	5,868,210	02/09/1999	Johnson et al.	175	40	05/01/1996
		M	5,879,057	03/09/1999	Schwoebel et al.	299	17	11/12/1996
Γ		N	5,884,704	03/23/1999	Longbottom et al.	16	313	08/20/1997
Γ		0	5,917,325	06/29/1999	Smith	324	326	08/25/1997
ľ	\top	P	5,934,390	08/10/1999	Uthe	175	67	12/23/1997
T		Q	5,938,004	08/17/1999	Roberts et al.	198	812	02/14/1997
Γ		R	5,941,308	08/24/1999	Malone et al.	166	313	12/18/1996
F		S	5,957,539	09/28/1999	Durup et al.	299	4	07/17/1997
		T	5,971,074	10/26/1999	Longbottom et al.	166	313	07/01/0998
T		U	6,012,520	01/11/2000	Yu et al.	166	245	01/04/1999
Γ	T	٧	6,015,012	01/18/2000	Reddick	166	313	08/29/1997
		W	6,024,171	02/15/2000	Montgomery et al.	166	308	03/12/1998
		X	6,050,335	04/18/2000	Parsons	166	272.3	10/26/1998
		Y	6,056,059	05/02/2000	Ohmer	166	313	07/24/1997
T		Z	6,065,550	05/23/2000	Gardes	175	62	02/19/1998
		AA	6,119,771	09/19/2000	Gano et al.	166	50	01/27/1998
		BB	6,135,208	10/24/2000	Gano et al.	166	313	05/28/1998
$-\mathcal{E}$	大	CC	6,209,636	04/03/2001	Roberts et al.	166	117.6	03/07/1999

EXAMINER DATE CONSIDERED 2/23/06

Page 8 of 16 Application No. Applicant(s) PTO-1449 Joseph A. Zupanick 10/769,221 Docket Number Group Art Unit Filing Date Citation Information Disclosu January 30, 2004 067083.0214 in an Assilication **U.S. PATENT DOCUMENTS** DATE NAME CLASS SUBCLASS **FILING DATE** DOCUMENT NO. 11/20/1998 299 08/28/2001 Zupanick 12 6,280,000 03/03/2000 313 166 В. 6,349,769 02/26/2002 Ohmer 11/19/1999 C. 03/19/2002 166 52 Zupanick 6,357,523 01/30/2001 175 61 07/30/2002 D. 6,425,448 Zupanick et al. 03/03/2000 313 166 E. 6,439,320 08/27/2002 Zupanick 06/06/2001 166 250.01 F. 09/17/2002 Mones 6,450,256 10/24/2000 243 166 G. 6,454,000 09/24/2002 Zupanick 01/29/2001 175 62 Н. 6,457,540 10/01/2002 Gardes 166 50 02/20/2001 11/12/2002 6,478,085 Zupanick I. 417 85 04/24/2001 6,497,556 12/24/2002 Zupanick J. 06/20/2001 175 69 K. 6,561,288 05/13/2003 Zupanick 250 269.3 05/26/2000 L. 6,566,649 05/20/2003 Mickael 05/14/2001 06/03/2003 175 61 М. 6,571,888 Comeau 09/15/2002 50 N. 06/10/2003 Zupanick 166 6,575,235 324 338 01/19/2002 06/10/2003 Thompson Ο. 6,577,129 45 10/15/2001 175 07/01/2003 Radzinski P. 6,585,061 05/08/2001 269.4 Q. 6,590,202 07/08/2003 Mickael 250 12/06/2001 50 166 R. 6,591,903 07/15/2003 Ingle S. T. U. **FOREIGN PATENT DOCUMENTS** TRANSLATION **CLASS SUBCLASS** NO DOCUMENT NO. DATE COUNTRY YES **NON-PATENT DOCUMENTS**

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

DATE CONSIDERED

DOCUMENT (Including Author, Title, Source, and Pertinent Pages)

EXAMINER

DATE

Application No. Applicant(s) PTO-1449 Joseph A. Zupanick 10/769,221 Filing Date Docket Number **Group Art Unit** Citation Information Disclos 067083.0214 January 30, 2004 in and Applic **U.S. PATENT DOCUMENTS** FILING DATE CLASS SUBCLASS DOCUMENT NO. DATE NAME 01/24/2001 175 62 A. 6,598,686 07/29/2003 Zupanick 04/15/2002 245 166 6,604,580 08/12/2003 Zupanick В. 04/24/2001 417 36 C. 6,604,910 08/12/2003 Zupanick 175 38 05/17/2001 08/19/2003 Hoyer et al. D. 6,607,042 340 854.3 06/25/2000 Winnacker 10/21/2003 E. 6,636,159 250 269.6 03/14/2001 10/28/2003 Odom et al. F. 6,639,210 324 338 01/19/2002 11/11/2003 Thompson et al. G. 6,646,411 12/28/2001 324 355 11/25/2003 Yuratich et al. Н. 6,653,839 01/03/2001 6,662,870 12/16/2003 Zupanick 166 245 Ī. 06/07/2002 12/30/2003 Zupanick 166 50 J. 6,668,918 09/26/2002 50 213 01/20/2004 Zupanick 166 K. 6,679,322 50 10/19/2001 01/27/2004 Zupanick 166 Ĺ. 6,681,855 50 06/07/2002 166 Μ. 6,688,388 02/10/2004 Zupanick N. O. Ρ. 16l Q. R. S. T. Ū. ٧. **FOREIGN PATENT DOCUMENTS** TRANSLATION DOCUMENT NO. **CLASS SUBCLASS** YES NO DATE COUNTRY NON-PATENT DOCUMENTS DOCUMENT (Including Author, Title, Source, and Pertinent Pages) DATE **EXAMINER** EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Application No. Applicant(s) PTO-1449 Joseph A. Zupanick 10/769,221 **Docket Number Group Art Unit** Filing Date ம்?e Citation Information Disclos January 30, 2004 067083.0214 in an Application **U.S. PATENT DOCUMENTS FILING DATE** DOCUMENT NO. DATE NAME CLASS SUBCLASS 12/15/2000 313 A. 2002/0074120 06/20/2002 Scott 166 05/16/2001 313 2002/0074122 06/20/2002 Kelly et al. 166 B. 09/27/2001 C. 2002/0050358 05/02/2002 Algeroy 166 313 313 09/16/2002 D.. 2003/0075334 04/24/2003 Haugen et al. 166 61 09/30/2002 E. 2003/0062198 175 04/03/2003 Gardes 245 12/06/2001 F. 2003/0106686 06/12/2003 Ingle et al. 166 175 57 10/04/2002 2003/0066686 04/10/2003 Conn G. 02/20/2001 H. 2001/0096336 11/01/2001 Zupanick 175 161 ī. 2002/0189801 12/19/2002 Zupanick 166 50 07/01/2002 08/15/2002 Zupanick 166 50 04/15/2002 J. 2002/0108746 50 04/15/2002 2002/0117297 08/29/2002 Zupanick 166 K. 07/12/2002 2004/0007389 01/15/2004 Zupanick 175 61 L. 07/12/2002 175 61 М. 2004/0007390 01/15/2004 Zupanick N. 0. P. 161 Q. R. S. T. Ū. V. **FOREIGN PATENT DOCUMENTS** TRANSLATION DOCUMENT NO. **CLASS SUBCLASS** YES NO DATE COUNTRY NON-PATENT DOCUMENTS **DOCUMENT (Including Author, Title, Source, and Pertinent Pages)** DATE **EXAMINER** EXAMINER: Initial if ciration considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Applicant(s) Application No. PTO-1449 Joseph A. Zupanick 10/769,221 **Group Art Unit** Filing Date **Docket Number** e Citation Information, January 30, 2004 067083.0214 in an Application U.S. PATENT DOCUMENTS CLASS SUBCLASS FILING DATE DOCUMENT NO. DATE NAME **FOREIGN PATENT DOCUMENTS** TRANSLATION **CLASS SUBCLASS** DOCUMENT NO. YES DATE COUNTRY E21B 43/24 X 94/21889 wo 09/29/1994 E21B 43/30 $\overline{\mathbf{x}}$ 0 875 661 A1 ′ EΡ B. 11/04/1998 E21B 7/12 0 952 300 A1 / 10/27/1999 EΡ X C. 41/00 X 06/02/0000 wo E21C D. 00/31376 / E21B 43/30 X Ε WO 99/60248 / 11/25/1999 PCT E21B 43/25 X F. WO 00/79099 12/28/2000 PCT PCT E21B 43/00 X 08/01/2002 WO 02/059455 G. 07/04 X E21B 03/07/2002 PCT WO 02/18738 / 07/08 X GB 2297 988 08/21/1996 UK E21B Î. 43/00 X 08/30/02 UK E21B GB 2347157 J. PCT E21B X 12/11/2003 K. WO 03/102348 E21B 43/00 X 08/08/2002 PCT WO 03/061238 L. F 5/00-F 7/00 $\overline{\mathbf{x}}$ E21 SU-1448078-A1 03/25/1987 Russia X E21 F 7/00 N. SU-1770570-A1 03/30/1990 Russia $\overline{\mathbf{x}}$ O. 06/26/1975 E21 C 45/00 SU-750108 Russia **NON-PATENT DOCUMENTS** DATE **DOCUMENT (Including Author, Title, Source, and Pertinent Pages)** Examiner of Record, Office Action Response regarding the Interpretation of the three Russian Patent Date Unknown Applications listed above under Foreign Patent Documents (9 pages) Q. R. S T. **EXAMINER** DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through

citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Applicant(s) Application No. PTO-1449 10/769,221 Joseph A. Zupanick Filing Date **Group Art Unit Docket Number** Information Disclosur 067083.0214 January 30, 2004 in an Application **U.S. PATENT DOCUMENTS FILING DATE** CLASS SUBCLASS DATE DOCUMENT NO. NAME FOREIGN PATENT DOCUMENTS TRANSLATION **CLASS** SUBCLASS NO COUNTRY YES DOCUMENT NO. DATE NON-PATENT DOCUMENTS DATE **DOCUMENT (Including Author, Title, Source, and Pertinent Pages)** McCray and Cole, "Oil Well Drilling and Technology," University of Oklahoma Press, pp 315-319. 1959 Berger and Anderson, "Modern Petroleum;" Penn Well Books, pp. 106-108. 1978 Arfon H. Jones et al., A Review of the Physical and Mechanical Properties of Coal with Implications for Coal-1988 C. Bed Methane Well Completion and Production, Rocky Mountain Association of Geologists, pages 169-181 Howard L. Hartman, et al.; "SME Mining Engineering Handbook;" Society for Mining, Metallurgy, and 1992 ח Exploration, Inc.; pp. 1946-1950, 2nd Edition, Volume 2. Dave Hassan, Mike Chemichen, Earl Jensen, and Morley Frank; "Multi-lateral technique lowers drilling costs, 10/1999 E. provides environmental benefits", Drilling Technology, pp. 41-47. 04/02/2001 Gopal Ramaswamy, "Production History Provides CBM Insights," Oil & Gas Journal, pages 49, 50 and 52. F. Weiguo Chi and Luwu Yang, "Feasibility of Coalbed Methane Exploitation in China," Horizontal Well 09/2001 G. Technology, page 74 Received Nackerud Product Description, Harvest Tool Company, LLC, 1 page. Н. 09/27/2001 10/2001 Gopal Ramaswamy, "Advanced Key for Coalbed Methane," The American Oil & Gas Reporter, Pages 71 & Ī. Joseph C. Stevens, Horizontal Applications For Coal Bed Methane Recovery, Strategic Research Institute, 03/25/2002 J. pages 1-10 (slides) R.J. "Bob" Stayton, "Horizontal Wells Boost CBM Recovery", Special Report: Horizontal & Directional 08/2002 K. Drilling, The American Oil & Gas Reporter, pp. 71-75 P. Jackson and S. Kershaw, "Reducing Long Term Methane Emissions Resulting from Coal Mining, Energy 1996 Convers. Mgmt, Vol. 37, Nos 6-8, pp. 801-806 09/2002 Susan Eaton, "Reversal of Fortune", New Technology Magazine, pp. 30-31 09/2002 James Mahony, "A Shadow of Things to Come", New Technology Magazine, pp. 28-29 Received Documents Received from Third Party, Great Lakes Directional Drilling, Inc., (12 pages) O. 09/12/02 DATE CONSIDERED EXAMINER EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

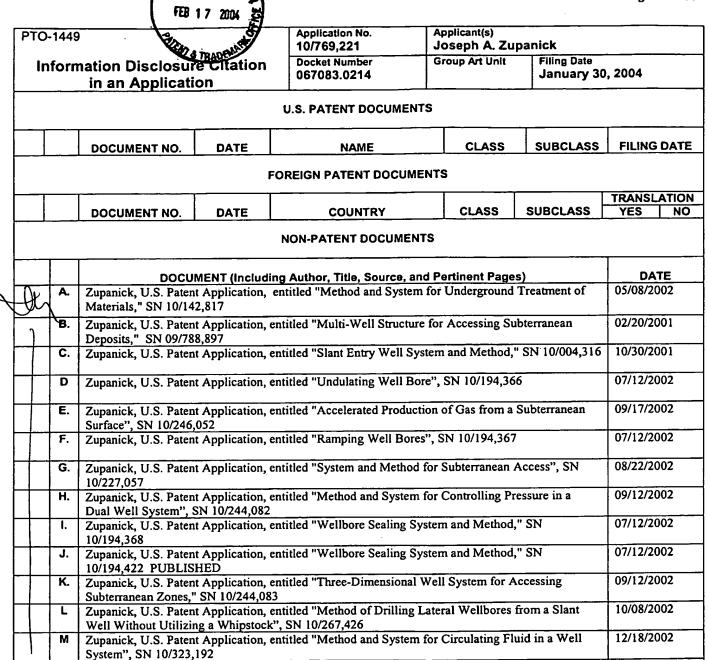
FEB 17 2004 Application No. Applicant(s) PTO-1449 10/769,221 Joseph A. Zupanick **Group Art Unit** Filing Date **Docket Number** Information Disting e Citation 067083.0214 January 30, 2004 in an Application **U.S. PATENT DOCUMENTS** DATE NAME **CLASS** SUBCLASS **FILING DATE** DOCUMENT NO. **FOREIGN PATENT DOCUMENTS** TRANSLATION **CLASS SUBCLASS** DOCUMENT NO. DATE COUNTRY YES NO NON-PATENT DOCUMENTS DATE **DOCUMENT (Including Author, Title, Source, and Pertinent Pages)** Robert W. Taylor and Richard Russell, "Multilateral Technologies Increase Operational Efficiencies in 03/16/1998 Middle East, Oil & Gas Journal, pp. 76-80 Adam Pasiczynk, "Evolution Simplifies Multilateral Wells", Directional Drilling, pp. 53-55 06/2000 Steven S. Bell, "Multilateral System with Full Re-Entry Access Installed", World Oil, p. 29 06/1996 Pascal Breant, "Des Puits Branches, Chez Total: les puits multi drains", Total Exploration Production, pp. 1-5 01-1999 D. Chi, Weiguo, "A Feasible Discussion on Exploitation Coalbed Methane through Horizontal Network Drilling 11/7/2000 E. in China", SPE 64709, Society of Petroleum Engineers (SPE International), 4 pages Chi, Weiguo, "Feasibility of Coalbed Methane Exploitation in China", synopsis of paper SPE 64709, 1 page 11/7/2000 1993 lan D. Palmer et al., "Coalbed Methane Well Completions and Stimulations", Chapter 14, pp. 303-339, Hydrocarbons from Coal, Published by the American Association of Petroleum Geologists 08/15/2003 Zupanick, U.S. Patent Application Serial No. 10/264,535, "Method and System for Removing Fluid From a Н. Subterranean Zone Using an Enlarged Cavity" Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed 07/11/2003 Ī. November 6, 2003 (8 pages) re International Application No. PCT/US 03/21626 07/11/2003 Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed J. November 5, 2003 (8 pages) re International Application No. PCT/US 03/21627 Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed 07/11/2003 November 4, 2003 (7 pages) re International Application No. PCT/US 03/21628 Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed 07/11/2003 December 5, 2003 (8 pages) re International Application No. PCT/US 03/21750 DATE CONSIDERED **EXAMINER** EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPÉP § 609. Draw line through

citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Application No. Applicant(s) PTO-1449 Joseph A. Zupanick 10/769,221 Information Dischies Filing Date **Docket Number Group Art Unit** Citation 067083.0214 January 30, 2004 in an Application U.S. PATENT DOCUMENTS SUBCLASS **FILING DATE CLASS** DOCUMENT NO. DATE NAME FOREIGN PATENT DOCUMENTS TRANSLATION **CLASS** SUBCLASS DOCUMENT NO. DATE YES NO COUNTRY **NON-PATENT DOCUMENTS** DATE DOCUMENT (Including Author, Title, Source, and Pertinent Pages) Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed Filed 09/09/2003 December 19, 2003 (8 pages) re International Application No. PCT/US 03/28137 Notification of Transmittal of the International Search Report or the Declaration (PCT Rule 44.1) mailed Filed 09/09/2003 February 4, 2004 (8 pages) re International Application No. PCT/US 03/26124 Smith, Maurice, "Chasing Unconventional Gas Unconventionally," CBM Gas Technology, New Technology 10/2003 C. Magazine, October/November 2003, pp. 1-4. 11/2003 06/16/2002 -D. Gardes, Robert "A New Direction in Coalbed Methane and Shale Gas Recovery," (to the best of Applicants' 06/17/2002 recollection, first received at The Canadian Institute Coalbed Methane Symposium conference on June 16 and June 17, 2002), I page of conference flyer, 6 pages of document. 12/09/2003 Gardes, Robert, "Under-Balance Multi-Lateral Drilling for Unconventional Gas Recovery," (to the best of E Applicants' recollection, first received at The Unconventional Gas Revolution conference on December 9, 2003), 4 pages of conference flyer, 33 pages of document. 12/10/2003 Boyce, Richard "High Resolution Selsmic Imaging Programs for Coalbed Methane Development," (to the best of Applicants' recollection, first received at The Unconventional Gas Revolution conference on December 10, 2003), 4 pages of conference flyer, 24 pages of document. 01/2002 Mark Mazzella and David Strickland, "Well Control Operations on a Multiwell Platform Blowout," G. WorldOil.com - Online Magazine Article, Volume 22, Part I - pp. 1-7, and Part II - pp. 1-13. H. Vector Magnetics LLC. Case History, California, May 1999, "Successful Kill of a Surface Blowout," pp. 1-12. 05/1999 2000 Cudd Pressure Control, Inc, "Successful Well Control Operations-A Case Study: Surface and Subsurface Well Multi-Well Offshore Platform Blowout and Fire," http://www.cuddwellcontrol.com/literature/successful/successful_well.htm. R. Purl, et al., "Damage to Coal Permeability During Hydraulic Fracturing," pp. 109-115 (SPE 21813) 1991 U.S. Dept. of Energy - Office of Fossil Energy, "Multi-Seam Well Completion Technology: Implications for 09/2003 Powder River Basin Coalbed Methane Production," pp. 1-100, A-1 through A10 U.S. Dept. of Energy - Office of Fossil Energy, "Powder River Basin Coalbed Methane Development and 09/2003 Produced Water Management Study," pp. 1-111, A-1 through A14 DATE CONSIDERED **EXAMINER** EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through

citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

10/03/2002



EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

DATE CONSIDERED

Zupanick, U.S. Patent Application, entitled "Method and System for Removing Fluid from a

Subterranean Zone Using and Enlarged Cavity", SN 10/264,535

EXAMINER

. ·	4.	C E	•					
							Page 16 of 16	
PTO-1449 17 2004 5				10/769,221 J		Applicant(s) Joseph A. Zupanick		
lr	nform	nates Disclos re Citation in an ຂອງເຂົ້າຂໍ້ອີ	Docket Nur 067083.0		Group Art Unit Filing I Janua		g Date uary 30, 2004	
U.S. PATENT DOCUMENTS								
		DOCUMENT NO. DATE	· N	AME	CLASS	SUBCLASS	FILING DATE	
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NO. DATE	COL	JNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
NON-PATENT DOCUMENTS								
	т -	T						
	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)						12/23/2002	
k ()_(A.	Zupaniek, O.B. I atent rippheation, chimical instance and System for Sentence and						
	В.	Rate, SN 10/328,408 Rial, U.S. Patent Application, entitled "Method and System for Accessing a Subterranean Zone 07/01/2						
├-	C.	from a Limited Surface Area, SN 10/188,141 Zupanick, U.S. Patent Application, entitled "Three-Dimensional Well System for Accessing 0						
	J 0.	Zupanick, U.S. Patent Application, entitled "Three-Dimensional Well System for Accessing Subterranean Deposits from the Surface and Tools Therefor," SN 10/630,345						
	D.	Zupanick, U.S. Patent Application, entitled "Method and System for Testing Partially Formed Hydrocarbon Well for Evaluation and Well Planning Refinement," SN 10/715,300					11/17/2003	
	E.	Rial, U.S. Patent Application, entitled "Method and System for Recirculating Fluid in a Well System," SN 10/457,103					06/05/2003	
	F.	Zupanick, U.S. Patent Application, entitled "Wellbore Sealing System and Method," SN 10/406,037 Published					07/12/2002	
	G.	Seams, U.S. Patent Application, entitled "Method and System for Extraction of Resources from a Subterranean Well Bore," SN 10/723,322					11/26/2003	
	H.	Zupanick, U.S. Patent Application, entitled "Method and System for Accessing Subterranean Deposits from the Surface," SN 10/641,856						
	I.	Zupanick, U.S. Patent Application, entitled "Slant Entry Well System and Method," SN 10/749,884						
J	y .	Zupanick, U.S. Patent Application, entitled "Method and System for Accessing a Subterranean Deposits from the Surface, SN 10/761,629						
	K.							
	L.							
	M.							
	N.					· · · · · · · · · · · · · · · · · · ·		
	О.							
	P.			**		<u> </u>		
EXAMINER DATE CONSIDERED							<u> </u>	